



ERA-HELICOPTERS, INC.

GULF COAST DIVISION
LAKE CHARLES, LA

PROCESS SPECIFICATION

PROCESS SPECIFICATION NUMBER: ERA-1023

INSTALLATION OF COIL THREAD INSERTS INTO COMPOSITE FABRICATIONS

PREPARED BY:

John E. Stanley
MESH COMPOSITES INC.

DATE: 1/18/88

APPROVALS

MANUFACTURING	QUALITY CONTROL	ENGINEERING	
 	 	 	MESH ERA



GULF COAST DIVISION
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PROCESS SPECIFICATION

Scope: This specification outlines the requirements for installing coil thread inserts in composite fabrications.

Conformation: This specification does not conform to any existing government specification.

Subcontractors: MESH COMPOSITES INC. of Lake Charles, Louisiana, or its subcontractor shall be the only subcontractors qualified to construct the FRP requirements and shall comply with this process specification. Any deviations or variations are to be submitted to ERA for approval with proper documentation prior to fabrication.

Conflicts: In the event of a conflict with engineering drawing(s) and this specification, the drawing(s) shall govern.

Installation of Coil Thread Inserts in Composite Fabrications

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MATERIALS

<u>MATERIALS</u>	<u>NAME</u>	<u>MANUFACTURER</u>
Coil Thread Inserts	Heli-Coil	Heli-Coil Products Danbury, Conn.
	Thread Inserts	MBB Inc. Westchester, Pa.

INSTALLATION

- 1) Drill holes to depth specified on drawing using drill bit size as shown on drawing.
- 2) Using tap for the thread specified on the drawing, tap hole to depth shown on drawing.
- 3) Retract mandrel and place insert in the tool with tang end toward the front of the tool.
- 4) Rotate mandrel through the insert until tang is fully engaged in driving contour. Continue to rotate mandrel until insert is engaged in one or two threads in body.
- 5) Place tool squarely against the tapped hole and rotate mandrel, holding the body with one hand until the top of the insert is 1/4 to 1/2 turn below the surface. Remove mandrel.
- 6) Break off tang using a punch or rod having a diameter that just fits into the assembled insert. Make sure that the punch or rod has a square end with no chamfer. Place punch or rod into the assembled insert until it rests on the tang. Holding the tool squarely, strike it sharply with a hammer. This completes the installation.

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INSPECTION

It is the purpose of the inspection to verify that each part has been fabricated in accordance with and meets the requirements of this specification.

RESPONSIBILITIES: It is the responsibility of the fabricator to make available to ERA Helicopter or his authorized representative any or all of the following:

Records: Records pertaining to the part(s) being purchased shall be supplied when requested. These may include:

- Materials specifications
- Equipment drawings or mold jig
- Materials test results.
- Dimensional verification reports.
- Rework and repair reports.

FABRICATED PARTS: The part to be inspected shall be properly located and positioned, and shall be in condition to permit safe and thorough inspection. Reasonable means shall be provided to permit the inspector to visually examine the entire inner and outer surfaces of the part.